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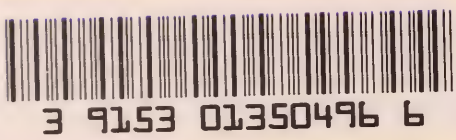

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MEDICAL CERTIFICATION OF CAUSE OF DEATH

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WORLD HEALTH ORGANIZATION

GENEVA

1968

INTERNATIONAL

The World Health Organization (WHO) is one of the specialized agencies in relationship with the United Nations. Through this organization, which came into being in 1948, the public health and medical professions of more than 120 countries exchange their knowledge and experience, and collaborate in an effort to achieve the highest possible level of health throughout the world. WHO is not concerned with problems that individual countries or territories can solve with their own resources. It deals, rather, with problems that can be satisfactorily solved only through the co-operation of all or several countries—for example, the eradication or control of malaria, schistosomiasis, smallpox, and other communicable diseases, as well as some cardiovascular diseases and cancer. Progress towards better health throughout the world also demands international co-operation in many other activities : for example, setting up international standards for biological substances, for pesticides and for pesticide spraying equipment ; compiling an international pharmacopoeia ; drawing up and administering the International Sanitary Regulations ; revising the international lists of diseases and causes of death ; assembling and disseminating epidemiological information ; recommending non-proprietary names for drugs ; and promoting the exchange of scientific knowledge. In many parts of the world there is need for improvement in maternal and child health, nutrition, nursing, mental health, dental health, social and occupational health, environmental health, public health administration, professional education and training, and health education of the public. Thus a large share of the Organization's resources is devoted to giving assistance and advice in these fields and to making available—often through publications—the latest information on these subjects. Since 1958 an extensive international programme of collaborative research and research co-ordination has added substantially to knowledge in many fields of medicine and public health. This programme is constantly developing and its many facets are reflected in WHO publications.

MEDICAL CERTIFICATION OF CAUSE OF DEATH

Instructions for Physicians
on Use of International Form
of Medical Certificate of Cause of Death

WORLD HEALTH ORGANIZATION
GENEVA
1968

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CONTENTS

	Page
Introduction	5
Instruction for completion of death certificate	6
Disease or condition leading directly to death	6
Antecedent causes	6
Other significant conditions	8
Interval between onset and death	8
Illustrative examples of certification	8
Avoidance of indefinite and inadequate terms	11
Avoidance of redundant and misplaced entries	15
Annex. Examples of incomplete descriptions of cause of death	16

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Introduction

What was the cause of death ? Faced with the duty of trying to answer this question on a certificate, the physician or surgeon often has to ask himself, "What is meant by the cause if several morbid conditions are concerned ? How can I best express what I believe on the form so as to give the statistical office what it wants ? What, in fact, does it want ?"

The International Form of Medical Certificate of Cause of Death prescribed by the World Health Organization calls for statements on the morbid condition directly leading to death, the conditions antecedent to it, the underlying cause of death, and contributory conditions not related to the direct or antecedent causes. In order to obtain correct factual data on the distribution of diseases, it is essential that the certifiers in each country where vital statistics on causes of death are collected should realize what is required of them in using the international form of certificate. This booklet was originally prepared by the WHO Centre for Classification of Diseases in response to a recommendation of the WHO Expert Committee on Health Statistics.[1] It is intended to assist physicians and surgeons in understanding the concepts involved and to guide them in writing death certificates. The present edition has been slightly revised in order to clarify some of the instructions.

With a view to making uniform the procedure for tabulating statistics and enhancing their usefulness as instruments of research, the Sixth Decennial International Revision Conference, meeting in Paris in 1948, agreed that the cause of death to be tabulated should be the *underlying cause*, defined as "(*a*) the disease or injury which initiated the train of morbid events leading directly to death, or (*b*) the circumstances of the accident or violence which produced the fatal injury". To ensure uniformity in application of this principle, the Revision Conference designed the International Form of Medical Certificate of Cause of Death. This international form and the principle of selecting the underlying cause as basis for primary death tabulation were retained by the Seventh and Eighth Revision Conferences, held in 1955 and 1965.[2]

The use of this form places upon the certifier the responsibility of indicating the course of events, since he is in a better position than anyone else to decide what was the direct cause of death and what antecedent conditions, if any, gave rise to the direct cause. Mortality statistics should reflect, as nearly as possible, the opinion of the doctor who knew or

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[1] *World Hlth Org. techn. Rep. Ser.*, 1950, **5**, 5

[2] World Health Organization (1967) *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death*, Geneva, vol. 1, p. 415

saw the patient as to what was the underlying cause of death ; before 1948, the practice in most countries was to give one condition automatic precedence over another regardless of the sequence in which they were recorded on the death certificate.

Certificates stating only a single condition seldom present difficulties. Such certificates, however, form a diminishing proportion of the total, owing to the rapidly decreasing incidence and fatality in many countries of acute infectious diseases, the rising average age at death, and the increasing proportion of deaths from multiple chronic conditions. When several conditions are present at death, the classification of cause of death now depends largely upon the order in which the certifier enters them on the certificate. Therefore, if the certifier fails, through misunderstanding the arrangement of the form, to express his views adequately and accurately as to which was the underlying cause of death, the resultant statistics may not reflect his true opinion. It is therefore of the utmost importance that the form be completed in such a manner as to convey correctly to the statistical office the opinion of the certifying physician concerning the role played by each of the conditions mentioned.

Instructions for Completion of Death Certificate

The International Form of Medical Certificate of Cause of Death (see fig. 1) consists of two parts, designated I and II. Part I is subdivided into (*a*), (*b*), and (*c*), providing space for entries on the direct cause of death (*a*) and the antecedent causes (*b*) and (*c*).

Disease or condition leading directly to death

First, enter on line I (*a*) of the form the condition which was the direct cause of death. This entry does *not* mean the mode of dying (e.g., heart failure, respiratory failure), which should not be stated at all since it is no more than a synonym for the fact that death occurred and provides no useful information. It means the disease, injury, or complication which directly preceded death. It may be the sole entry on the certificate if only one condition was present at death, or, if the direct cause of death was a complication, such as peritonitis or septicaemia, the antecedent causes will have to be entered under I (*b*) and (*c*) (see below) ; in the case of violent death, the direct cause of death is the injury resulting from external causes. There must always be an entry on line I (*a*).

Antecedent causes

Next, consider whether the direct cause arose as a consequence of any antecedent disease or injury of which it was a complication or delayed result. Was there an intermediate step, or stage, between normal health and the development of the direct cause of death ?

Fig. 1

INTERNATIONAL FORM OF MEDICAL CERTIFICATE OF CAUSE OF DEATH

CAUSE OF DEATH		Approximate interval between onset and death
I		
Disease or condition directly leading to death *	(*a*)	.....
	due to (or as a consequence of)	
Antecedent causes Morbid conditions, if any, giving rise to the above cause, stating the underlying condition last	(*b*)	.....
	due to (or as a consequence of)	
	(*c*)	.....
II		
Other significant conditions contributing to the death, but not related to the disease or condition causing it	.....	.....
	.....	.....

* This does not mean the mode of dying, e.g., heart failure, asthenia, etc. It means the disease, injury, or complication which caused death.

Antecedent cause entered in I (b)

The condition, if any, to be entered on line (*b*) must be considered to have been antecedent to the direct cause both in respect of time and of etiological or pathological relationship, the direct cause being " due to " it or " as a consequence of " it. If a condition is believed to have prepared the way for the direct cause by damage of tissues or impairment of function, it can be entered as antecedent even though a long interval of time has elapsed since its onset or since it gave rise to symptoms. In the case of an injury, the form of external violence or accident producing it is antecedent to the injury described in I (*a*) and can properly be entered in I (*b*) although the two events are almost simultaneous. Hypothetical constitutional states or factors that may have preceded, or predisposed to, a well-defined disease should not be entered as antecedent causes.

Antecedent cause entered in I (c)

Before an antecedent condition is entered in I (*b*), it is necessary to decide whether there was any other condition present that could be considered an antecedent cause in the sense described above, and, if so, whether this antecedent condition was the starting point in the chain of related events leading to the direct cause. In that case the starting point of the whole series should be entered in I (*c*) and the most important of the intervening conditions on line I (*b*).

On no account must the starting point of the sequence be entered in part II because of lack of space for it in part I.

No antecedent cause

If the certifier decides that there has not been any antecedent condition as defined above, lines I (*b*) and I (*c*) should be left blank.

Underlying cause, for tabulation

Provided the instructions have been carried out correctly, the *underlying cause*, to be used as the basis for statistics, will depend upon the condition entered on the lowest line of part I of the form, namely

	in case of :
Line I (*c*)	two antecedent conditions in etiological and chronological sequence
Line I (*b*)	no intervening step between the initial and direct causes of death
Line I (*a*)	no antecedent causes worth mentioning.

Other significant conditions

After completing part I, the certifier must consider whether there was any other condition that, though not a part of the causal sequence entered in part I, contributed something to the fatal outcome. If so, this can be entered in part II. Such a condition must not be related to the direct cause of death. Mention may be made here of normal pregnancy, if it is thought to have contributed anything to the fatal issue, or of a chronic disease in a person who died from an accidental injury.

Interval between onset and death

Where the interval between presumed onset of each condition entered on the certificate and date of decease is known, even approximately, it should be entered in the column provided for the purpose. This information will provide a useful check on the sequence of causes in part I, as well as information about the duration of illness for certain diseases.

Illustrative Examples of Certification

Case 1

Child dying of toxaemia in an attack of diphtheria. It is sufficient to certify as follows :

I (*a*) Diphtheria . . . . . 4 days

Case 2

Child dying of pneumonia following measles. The direct cause of death is pneumonia, and measles is antecedent both in time and causal relationship.

I (*a*)	Pneumonia	6 days
(*b*)	Measles	3 weeks

The underlying cause is measles.

Case 3

Adult dying of peritonitis resulting from perforation of a duodenal ulcer, carcinoma of the bronchus also being present.

I (*a*)	Peritonitis	2 days
(*b*)	Perforation of duodenum	4 days
(*c*)	Duodenal ulcer	6 months
II	Bronchogenic carcinoma	3 months

The underlying cause is duodenal ulcer.

Case 4

Elderly man dying of hypostatic pneumonia after being bedridden owing to fracture of the neck of femur caused by fall from a ladder at home.

I (*a*)	Hypostatic pneumonia	1 day
(*b*)	Fracture of neck of femur	7 days
(*c*)	Fall from ladder at home	7 days

The underlying cause is fall from ladder at home.

Case 5

Adult aged 45 dying of mitral incompetence which originated in an attack of rheumatic fever 20 years before.

I (*a*)	Mitral incompetence	3 months
(*b*)	Mitral endocarditis	20 years
(*c*)	Rheumatic fever at age of 25 (no recent sign of activity) . .	20 years

The underlying cause is chronic mitral endocarditis of rheumatic origin.[3]

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[3] The International Classification provides a category for this distinct from acute or subacute rheumatic mitral endocarditis.

Case 6

Adult dying of shock following removal of the gallbladder for cholecystitis arising from gallstones, chronic nephritis also being present.

I (*a*)	Postoperative shock	3 hours
(*b*)	Cholecystectomy after cholecystitis	5 hours, 6 months
(*c*)	Gallstones	
II	Chronic nephritis	

The underlying cause is gallstones

Case 7

Woman dying of eclampsia immediately after prolonged labour caused by contracted pelvis, albuminuria having been observed before delivery began.

I (*a*)	Eclampsia after childbirth	12 hours
(*b*)	Toxaemia of pregnancy (albuminuria)	2 months
II	Contracted pelvis, prolonged labour	

The underlying cause is toxaemia of pregnancy.

Case 8

Elderly man dying of cerebral haemorrhage after several years' history of arteriosclerosis with symptoms suggestive of senile degeneration and enlarged prostate, but without hypertension or albuminuria.

I (*a*)	Cerebral haemorrhage	2 days
(*b*)	Arteriosclerosis	Several years
II	Prostatic hypertrophy	2 years

The underlying cause is arteriosclerosis but for statistical purposes the cause of death is classified as cerebral haemorrhage.[4]

Case 9

The following illustrates the importance of accurately stating the sequence of morbid conditions in order to allow selection of the cause considered "underlying" by the physician.

Diabetic patient who has been under insulin control for many years suddenly dies from a degenerative heart condition. Depending on the role

---

[4] In the International Classification the combination of cerebral haemorrhage and arteriosclerosis is assigned to the category cerebral haemorrhage.

played in the fatal outcome by one or the other condition, or both, the following entries are possible :

1. Assuming that the heart condition resulted from the long-standing diabetes, the sequence would be

I (*a*) Myocardial degeneration
(*b*) Diabetes

and the statistical office would select diabetes as the underlying cause of death, with the heart condition as a complication causing death.

2. If the heart condition developed independently of the diabetes, the two conditions would be entered

I (*a*) Myocardial degeneration
II Diabetes

and the heart disease would be recorded as the underlying cause, with diabetes merely a contributory condition.

3. If a patient suffering from both conditions dies from some other complication of diabetes (e.g., gangrene), the heart condition playing only a subsidiary part in the death, and without certainty that it arose from the diabetes at all, then the certificate should be in the form

I (*a*) Gangrene
(*b*) Diabetes
II Myocardial degeneration.

Each of the above certificates could be correct and would not be questioned by the statistical office. In some instances, however, certificates are received in this form :

I (*a*) Diabetes
(*b*) Myocardial degeneration.

This is an impossible sequence since I (*a*) could not be "due to" I (*b*) ; it indicates that the physician did not understand the way in which the certificate is intended to be used. In such a case the safest course for the statistical office is to inquire from the certifier what he really meant to say. If that is not possible, the appropriate coding rule for dealing with "highly improbable" sequences has to be applied, which may not always give the answer intended by the certifier.

Avoidance of Indefinite and Inadequate Terms

With each successive revision of the International List, the number of separate subdivisions in it has increased to meet the demands of specialists, public health departments, and research workers. It follows that, if the statistics relating to new subdivisions are to be of any use, increasing

precision is required in the writing of death certificates in order to provide the required information. For example, cancer of the uterus formed a single category prior to 1938, when it was subdivided into (*a*) cancer of cervix uteri, and (*b*) cancer of other defined part of uterus and of uterus with part unspecified. It was found, however, that so many certificates failed to state which part of the uterus was affected that the resulting statistics for (*a*) were very incomplete and almost meaningless. Nevertheless, realization that the causative factors for cervical and corpus cancer were different made it more important to obtain separation of the statistics, and at the 1948 Revision Conference distinct numbers were provided for cervix, corpus, and undefined uterine cancer. Countries wishing to obtain meaningful statistics had no alternative but to inquire which part was affected from certifiers who neglected to state it, a procedure involving the sending of thousands of letters annually.

This is an example of what happens when a certifier gives inadequate, partial, or vague information about causes of death that are of interest to research and public health workers ; the statistical office would fall short in fulfilling one of its important functions if it did not try to obtain the required information even at the cost of causing additional work and some annoyance to many doctors. It is almost as easy to write carcinoma of the cervix uteri on a certificate as to write cancer of uterus, or to write meningococcal meningitis instead of cerebrospinal meningitis, or acute nephritis instead of nephritis, or biliary calculus instead of calculus. The physician cannot always be certain, however, what detail is required by the statistical office for the purposes of the International Classification ; to aid him, a list of the inadequate descriptions most commonly employed, together with the additional information required for satisfactory coding, is given in the Annex. The list is not exhaustive, but its consultation by certifiers would eliminate the need for many thousands of inquiries from the statistical office, or, in countries where such inquiries are not sent, would greatly improve the quality and usefulness of the mortality statistics.

The principal deficiencies found in death certificates, with some common examples of each, are :

1. The term describes a symptom that may arise from diseases classified under several different headings of the International List— e.g., ascites, convulsions, diarrhoea, haematemesis, jaundice, paralysis, toxaemia. There is no objection to such terms, provided they are further explained or elaborated.

Examples :

Ascites in I (*a*) with alcoholic cirrhosis of liver in I (*b*)
Epileptic convulsions ; eclamptic convulsions

Diarrhoea of unknown cause
Haematemesis in I (*a*) with gastric ulcer in I (*b*)
Epidemic infectious jaundice ; haemolytic jaundice ; homologous serum jaundice ; obstructive jaundice in I (*a*) with gallstones in I (*b*)
Bell's paralysis ; progressive muscular paralysis ; spastic paralysis due to cerebral injury at birth ; paralysis of glottis ; paralysis agitans
Toxaemia in I (*a*) with hepatitis of pregnancy in I (*b*) ; nephritic toxaemia

2. The term describes a morbid condition that could result from several types of infection or poison. The certifier may omit the causative agent from the certificate either because be is uncertain of it or because be thinks the information is unnecessary. It is not possible for the statistical office to distinguish between these two reasons for the unsatisfactory entry, and inquiries may have to be sent in all instances of this kind where classification is uncertain ; or, failing that, the death has to be assigned to a residual group when it really belonged to a specific and important category. Many useless inquiries will be saved if the words "cause unknown" are entered after the description of the morbid condition when the certifier has been unable to make a more complete diagnosis.

Examples :

Dysentery—might be bacillary, amoebic, other protozoal
Encephalitis—might be acute infectious, tuberculous, post-vaccinal, post-infectious, etc.
Meningitis—might be meningococcal, tuberculous, influenzal, streptococcal, etc.
Neuritis—might be post-diphtheritic, rheumatic, alcoholic, arsenical, traumatic, or due to beriberi, lead poisoning, etc.
Osteomyelitis—might be tuberculous, staphylococcal, traumatic, etc.

3. The term may connote any of several morbid conditions having distinctive categories in the International Classification. Addition of an adjective often suffices to produce statistically useful entries.

Examples :

Bronchitis—acute, chronic, allergic, capillary, emphysematous
Goitre—simple, nodular, toxic (exophthalmic)
Nephritis—acute, subacute, chronic, arteriosclerotic
Pneumonia—influenzal, broncho-, lobar, hypostatic, embolic, chronic interstitial, atypical, neonatal
Rheumatism—chronic osteo-arthritic, chronic muscular, subacute articular, gonococcal

4. The disease is generally localized, and the International Classification subdivides it according to the organ or part of the body affected, but

the certifier fails to give that information—e.g., tuberculosis, late syphilis, aneurysm, benign and malignant neoplasm, boil, cellulitis, varicose veins, ulcer of intestine, peripheral neuritis, endocarditis.

For deaths due to secondary or metastatic growths from a malignant neoplasm it is necessary to know what was the site of the primary growth, even though removed long before death. If the primary site is unknown, that should be stated. For neoplasms of the liver, lung, and lymph glands, it should be stated whether they are believed to be primary or secondary. For neoplasms of the lip, tongue, mouth, throat, intestine, colon, and uterus, the point of origin should be described as specifically as possible. For neoplasms of bone, the kind of tissue—e.g., marrow, osseous tissue—from which it was believed to originate should be stated. The histological type should also be named in all cases where known.

5. The morbid condition is one that requires for its classification a knowledge of the circumstances in which it arose in addition to the diagnosis.

Examples :

Abortion—whether spontaneous, induced by the woman herself, by others for therapeutic or other reasons ; whether accompanied by sepsis or toxaemia

Accidents—whether in the course of work ; whether on a traffic highway, public place, at home, farm, mine, or other place ; whether deceased was a pedestrian, cyclist, occupant of a motor or other vehicle ; type of vehicles involved if a road accident, and whether collision occurred ; whether on a ship or boat, aeroplane or railway ; whether due to machinery, fire, explosion, fall, blow, poison, electric current, therapeutic misadventure, etc. ; nature of injury and part of body injured

Anaesthesia—purpose of administration and, if for operation, reason for operation ; nature of anaesthetic

Childbirth and pregnancy—whether delivery had occurred and whether morbid condition was present during pregnancy or originated during or after delivery

Congenital causes—if the underlying cause was a congenital condition, this should be stated

Operations—Caesarean section and use of instruments in parturition or abortion should be mentioned when death resulted during or after delivery. In the case of an operative fatality, the reason why the operation was performed, whether for diagnostic or therapeutic purposes, should always be stated, and, if the latter, what was the condition being treated

Prematurity—The weight of the infant at birth should be stated, and whether a single or multiple delivery. Any pathological condition

known to be present should be stated if important as a cause of death

Vaccination, inoculation—When death followed, the reason for inoculation, whether preventive or therapeutic, and the interval before death should be stated

Avoidance of Redundant and Misplaced Entries

No useful purpose is served by stating that there was collapse, exhaustion, syncope, or myocardial failure at the moment of death. Entering on the form a large number of causes and symptoms that do not affect the classification merely tends to cause confusion. Certifiers should consider first whether a single succinct description will give the information necessary for classification, after taking account of what has been said in the previous sections and consulting the list of inadequate terms in the Annex.

A disease or condition not in the pathological sequence leading to the direct cause should not be entered in part I. Occasionally two independent diseases may be thought to have contributed equally to the fatal issue, and in such an unusual case they may be entered on the same line, leaving the selection to be made by rules of precedence. With that exception, any significant morbid condition not in the direct sequence should be entered in part II, even though it may have been a by-product at some point in the main sequence in part I—e.g., I (*a*) Cerebral haemorrhage; (*b*) Arteriosclerosis; II Gangrene.

The interval between the presumed onset and death for the condition entered on line I (*a*) should never exceed that for the condition on line I (*b*) or I (*c*); nor should the interval for I (*b*) exceed that for I (*c*). This check will make sure that the sequence in part I proceeds upwards, and not downwards through a misunderstanding of the instructions.

Annex

EXAMPLES OF INCOMPLETE DESCRIPTIONS OF CAUSE OF DEATH

Term	Additional information needed for satisfactory coding according to International Classification
Abortion	Spontaneous or induced and reason if induced; period o gestation; whether sepsis or toxaemia
Abscess	Site and cause (e.g., tuberculous)
Anaemia	Variety if primary; cause if secondary
Aneurysm	Aortic (abdominal or thoracic), arterial, arteriovenous, cardiac; arteriosclerotic or syphilitic
Angina	Agranulocytic, diphtheritic, faucium, streptococcal, Vincent's; pectoris
Apoplexy	Site of lesion; recent or late effects
Appendicitis	Acute, chronic, perforated
Arteriosclerosis	Whether hypertensive (benign or malignant); nature of cardiac, cerebral, and renal manifestations, if any
Arteritis	Arteriosclerotic, syphilitic; cerebral, coronary
Arthritis	Acute, gonococcal, gouty, osteoarthritic, rheumatoid, tuberculous, due to rheumatic fever
Ascites	Cause of the condition
Asphyxia	Cause of the condition
Atheroma	Aorta, artery, valve of heart
Boil	Site
Bright's disease	Acute, subacute, chronic
Bronchitis	Acute, chronic; allergic, capillary, emphysematous
Burn	Site(s) and whether by fire, explosion, hot object, liquid, chemical, radiation
Calculus	Site
Cancer, carcinoma	Site of primary if known, otherwise sites of secondary; part where it originated if of lip, tongue, mouth, throat, intestine, colon, uterus; histological type if known
Carbuncle	Site
Cardiac debility, failure, dilatation	Disease causing the condition
Cardiovascular disease	Whether hypertensive; coronary or renal involvement
Carditis	Endo-, myo- or peri-; acute, rheumatic
Caries	Cause; part affected
Cellulitis	Cause; part affected
Cerebral effusion	Cause
Cerebrospinal meningitis	Meningococcal, tuberculous, or other cause
Childbirth	Complication and whether apparent before delivery
Chorea	Rheumatic, Huntington's, gravidarum

Term	Additional information needed for satisfactory coding according to International Classification
Cirrhosis of liver	Cause (e.g., alcoholic)
Convulsion, croup	Cause
Crushing	Whether fracture, internal injury ; external cause
Curvature of spine	Cause ; congenital or acquired
Cyst	Site ; congenital, multiple, hydatid, dermoid, retention
Debility	Disease causing the condition
Dementia	Disease causing the condition
Dermatitis	Variety
Diabetes	Complication or independent disease causing death ; particular care should be taken to differentiate between diabetes as the underlying cause and as a contributory condition (see pages 10 and 11)
Diarrhoea	Cause
Dysentery	Bacterial, amoebic, other protozoal
Eclampsia	Cause, and whether apparent before delivery
Embolism	Site and cause ; associated childbirth or abortion ; if following operation, state condition for which operation was performed
Encephalitis	Acute infectious, late effect of infectious ; post-vaccinal, post-exanthematous, idiopathic, meningococcal, suppurative, tuberculous
Endocarditis	Acute or chronic ; arteriosclerotic, hypertensive, rheumatic, or other ; if rheumatic, whether rheumatic fever was present at death
Endometritis	Whether puerperal infection
Fits	Apoplectic, epileptic, eclampsia, hysteria
Fracture	Bone ; part of skull or femur ; compound ; external cause
Gangrene	Site and cause ; diabetic, gas bacillus, senile
Gastritis	Cause
General paralysis	Of insane, or disease causing the condition
Glioma	Variety if known ; site
Goitre	Simple or toxic ; diffuse or nodular
Haematemesis	Disease causing the condition
Haemoptysis	Whether tuberculous
Haemorrhage	Site and cause
Hemiplegia	Cause and duration
Hepatitis	Acute infective, chronic, alcoholic, of newborn, of pregnancy, puerperal, post-immunization, post-transfusion
Hydrocephalus	Congenital, tuberculous, or other cause
Hypertension	Benign or malignant ; whether associated arteriosclerosis, cerebrovascular, cardiac, or renal manifestation, or pregnancy
Immaturity	Cause ; gestation period ; birth weight ; associated abnormality or disease if any
Influenza	Complications if any

Term	Additional information needed for satisfactory coding according to International Classification
Injury	Nature of injuries and parts of body injured ; whether accident, suicide, homicide, war injury ; place and circumstances of accident
Insanity	Form of mental disorder ; direct cause of death ; underlying congenital condition, cerebral disease, arteriosclerosis, syphilis
Jaundice	Catarrhal, epidemic, haematogenous, obstructive spirochaetal, toxic ; cause of obstruction or toxaemia if any, and whether occurring during pregnancy or the puerperium, or following immunization or transfusion. Avoid the term "malignant" jaundice
Laryngitis	Acute, chronic, tuberculous
Leukaemia	Lymphatic, myeloid, monocytic ; acute, chronic
Lymphadenitis	Cause (e.g., tuberculous, septic wound)
Lymphoma	Hodgkin's disease ; Brill-Symmers' disease
Malaria	Benign tertian, malignant tertian, quartan, ovale, blackwater fever, recurrent induced
Malformation	Congenital or acquired ; type and organ involved
Malignant neoplasm	*See* Cancer
Malnutrition	Congenital, or due to inadequate diet, disease, or (in infants) lack of care
Marasmus	Cause
Meningitis	*See* Cerebrospinal meningitis
Metritis	*See* Endometritis
Myocarditis	Acute rheumatic ; acute non-rheumatic, chronic rheumatic; other chronic (but avoid using " chronic myocarditis " to describe degeneration of the myocardium)
Neoplasm	Benign or malignant ; type and location ; if malignant, *see* Cancer
Nephritis	Acute; subacute, with oedema ; chronic. Infective or toxic; cause if known. Associated hypertension, arteriosclerosis, heart disease, or pregnancy.
Neuritis	Location ; cause (e.g., alcohol, lead, rheumatism)
Obstruction of intestine	Cause (e.g., cancer, congenital stenosis, foreign body, gallstone, hernia, paralytic following operation for stated condition)
Oedema of lungs	Acute ; hypostatic ; secondary to heart disease or failure ; with hypertension
Old age	Disease which hastened death, if any was present
Operation	Reason why performed ; if therapeutic, what was underlying cause of condition for which operation was performed ; if non-therapeutic, how operation caused death (e.g., anaesthetic)
Organic disease	Nature and location of the disease

Term	Additional information needed for satisfactory coding according to International Classification
Paget's disease	Whether of bone, breast, or skin
Paralysis, paresis	Cause and site of lesion, and precise form (e.g., acute ascending, agitans, amyotrophic, due to birth injury, due to cerebral vascular lesion, general of insane, of glottis. infantile, lead, Landry's, of specified nerve, hysterical)
Paraplegia	Spastic due to birth injury; due to cerebral lesion; due to spinal lesion
Parkinsonism, Parkinson's syndrome	Whether paralysis agitans is meant, or a late effect of acute infectious encephalitis
Pelvic abscess Perimetritis Peritonitis Phlebitis	Cause of the condition; whether due to puerperal or post-abortive infection
Phthisis	Whether tuberculosis, pneumoconiosis, or both
Pneumoconiosis	Asbestosis, byssinosis, silicosis; whether of occupational origin; associated tuberculosis if any
Pneumonia	Broncho-, lobar, atypical, chronic interstitial, hypostatic, influenzal, neonatal, tuberculous, following measles
Pneumothorax	Cause of the condition
Pregnancy	Complication causing death (*see also* Abortion, Childbirth)
Puerperal fever	Type of infection, and whether embolism, phlebitis, thrombosis, septicaemia. Avoid use of the term for post-abortive infection
Reticulosis	Reticulosarcoma; reticulo-endotheliosis; lymphoid follicular reticulosis
Rheumatic fever	Distinguish heart affections with active rheumatic fever at death from old heart lesions left by rheumatic fever
Rheumatism	Acute articular, subacute articular, muscular, gonococcal. Avoid use of the term for other conditions, e.g., chronic articular should be specified as rheumatoid arthritis, osteo-arthritis, spondylitis, etc.
Rickets	Active, late effects (e.g., genu valgum), foetal, renal, scurvy
Rodent ulcer	Location of ulcer
Salpingitis	Acute, chronic, gonococcal, tuberculous, post-abortive, puerperal
Sclerosis	Arterial, cerebral, coronary, disseminated, spinal (lateral, posterior), renal
Septicaemia, septic infection	Cause, and site if localized (*see also* Puerperal fever)
Silicosis	Occupational cause; associated tuberculosis
Softening of brain	Cause (e.g., embolism). Avoid as description of dementia
Spondylitis	Ankylosing, deformans, sacro-iliac, gonococcal, tuberculous
Stenosis, stricture	Congenital; cause if acquired, e.g., burn, cancer
Stomatitis	Aphthous, diphtheritic, mycotic, herpetic, septic, Vincent's, vitamin deficiency
Suffocation	Cause, e.g., bedclothes; inhaling food, foreign body, or smoke; mechanical, submersion, during birth

Term	Additional information needed for satisfactory coding according to International Classification
Syphilis	Congenital, early or late; organ affected
Tabes	Congenital, dorsalis, juvenile. Avoid term as description of wasting condition or mesenteric tuberculosis
Tetanus	Mode of infection if known—e.g., slight injury, major injury, puerperal
Tetany	Parathyroid, rickets, convulsions
Thrombosis	Arterial (e.g., cerebral, coronary, mesenteric, pulmonary, retinal); intracranial sinus (pyogenic, non-pyogenic, late effect); post-abortive, puerperal; venous, according to site of lesion; portal; if following operation, state condition for which operation was performed
Toxaemia	Cause of the condition. If of pregnancy, distinguish albuminuria, eclampsia, hyperemesis, hepatitis, hypertension. If during or after childbirth, specify when believed to have started
Tuberculosis	Organs affected, including pleura and parts of respiratory system. Associated pneumoconiosis if present. Avoid terms miliary and disseminated unless defined by localization—e.g., acute generalized miliary tuberculosis
Tumours	*See* Neoplasm
Ulcer	Site and cause; whether perforated
Uraemia	Cause if known—e.g., acute, subacute, or chronic nephritis; associated pregnancy or childbirth
Valvular disease	Valves affected; acute or chronic; arteriosclerotic, hypertensive, rheumatic, or other; if rheumatic, whether rheumatic fever was present at death
Yellow atrophy of liver	Cause if known—e.g., acute infective hepatitis, post-immunization, post-transfusion, toxaemia of pregnancy or of puerperium

MANUAL OF THE INTERNATIONAL STATISTICAL CLASSIFICATION OF DISEASES, INJURIES, AND CAUSES OF DEATH

Eighth Revision of the International Lists of Diseases and Causes of Death, adopted 1965

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CONTENTS

Volume 1 (English edition, 1967, xxxiii + 477 pages)

Introduction

International Statistical Classification of Diseases, Injuries, and Causes of Death

List of three-digit categories

Tabular list of inclusions and four-digit subcategories

Supplementary Classifications

Classification of Industrial Accidents According to Agency

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